

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A chemical luminescence method using a biochemical analysis unit, comprising the steps of:

i) obtaining a biochemical analysis unit provided with a plurality of porous adsorptive regions, to which ligands or receptors have been bound respectively,

ii) subjecting a labeled receptor or a labeled ligand, which has been labeled with a labeling substance, to specific binding with the ligands or the receptors, each of which has been bound to one of the porous adsorptive regions of the biochemical analysis unit, the labeled receptor or the labeled ligand being thereby specifically bound to at least one of the ligands or at least one of the receptors,

iii) subjecting an enzyme-labeled antibody to specific binding with the labeled receptor or the labeled ligand, which has been specifically bound to at least one of the ligands or at least one of the receptors, and

iv) causing a chemical luminescence substrate to undergo a reaction with the enzyme-labeled antibody, which has been specifically bound to the labeled receptor or the labeled ligand,

wherein, at the a time at which the enzyme-labeled antibody is subjected to the specific binding with the labeled receptor or the labeled ligand, which has been specifically bound to at least one of the ligands or at least one of the receptors, a reaction liquid containing the enzyme-

labeled antibody is forcibly caused to flow such that the reaction liquid containing the enzyme-labeled antibody flows across each of the porous adsorptive regions of the biochemical analysis unit.

2. (currently amended): A method as defined in Claim 1 wherein, after the reaction liquid containing the enzyme-labeled antibody has been forcibly caused to flow such that the reaction liquid flows across each of the porous adsorptive regions of the biochemical analysis unit, the forcible flowing is ceased during a period of time longer than the ~~period of time~~ during which the reaction liquid containing the enzyme-labeled antibody has been forcibly caused to flow.

3. (currently amended): A chemical luminescence method using a biochemical analysis unit, comprising the steps of:

- i) obtaining a biochemical analysis unit provided with a plurality of porous adsorptive regions, to which ligands or receptors have been bound respectively,
- ii) subjecting a labeled receptor or a labeled ligand, which has been labeled with a labeling substance, to specific binding with the ligands or the receptors, each of which has been bound to one of the porous adsorptive regions of the biochemical analysis unit, the labeled receptor or the labeled ligand being thereby specifically bound to at least one of the ligands or at least one of the receptors,

iii) subjecting an enzyme-labeled antibody to specific binding with the labeled receptor or the labeled ligand, which has been specifically bound to at least one of the ligands or at least one of the receptors, and

iv) causing a chemical luminescence substrate to undergo a reaction with the enzyme-labeled antibody, which has been specifically bound to the labeled receptor or the labeled ligand,

wherein, at ~~the~~a time at which the labeled receptor or the labeled ligand having been labeled with the labeling substance is subjected to the specific binding with the ligands or the receptors, each of which has been bound to one of the porous adsorptive regions of the biochemical analysis unit, a reaction liquid containing the labeled receptor or the labeled ligand, which has been labeled with the labeling substance, is forcibly caused to flow such that the reaction liquid containing the labeled receptor or the labeled ligand flows across each of the porous adsorptive regions of the biochemical analysis unit, and

wherein, at ~~the~~a time at which the enzyme-labeled antibody is subjected to the specific binding with the labeled receptor or the labeled ligand, which has been specifically bound to at least one of the ligands or at least one of the receptors, a reaction liquid containing the enzyme-labeled antibody is forcibly caused to flow such that the reaction liquid containing the enzyme-labeled antibody flows across each of the porous adsorptive regions of the biochemical analysis unit.

4. (currently amended): A method as defined in Claim 3 wherein, after the reaction liquid containing the enzyme-labeled antibody has been forcibly caused to flow such that the

reaction liquid flows across each of the porous adsorptive regions of the biochemical analysis unit, the forcible flowing is ceased during a period of time longer than the ~~period of time~~ during which the reaction liquid containing the enzyme-labeled antibody has been forcibly caused to flow.

5. (original): A reaction apparatus for use in a chemical luminescence method, comprising:

i) a reaction vessel, which is provided with a support section for releasably supporting a biochemical analysis unit within the reaction vessel, the biochemical analysis unit being provided with a plurality of porous adsorptive regions, to which ligands or receptors have been bound respectively, the reaction vessel being adapted to perform specific binding of a labeled receptor or a labeled ligand, which has been labeled with a labeling substance and has been specifically bound to at least one of the ligands or at least one of the receptors, and an enzyme-labeled antibody with each other, and

ii) flowing means for causing a reaction liquid containing the enzyme-labeled antibody to flow within the reaction vessel,

wherein the flowing means forcibly causes the reaction liquid containing the enzyme-labeled antibody to flow such that the reaction liquid containing the enzyme-labeled antibody flows across each of the porous adsorptive regions of the biochemical analysis unit.

6. (original): An apparatus as defined in Claim 5 wherein the flowing means also forcibly causes a reaction liquid containing the labeled receptor or the labeled ligand, which has been labeled with the labeling substance, to flow such that the reaction liquid containing the labeled receptor or the labeled ligand flows across each of the porous adsorptive regions of the biochemical analysis unit.

7. (currently amended): An apparatus as defined in Claim 5 wherein the flowing means operates such that, after the reaction liquid containing the enzyme-labeled antibody has been forcibly caused to flow such that the reaction liquid flows across each of the porous adsorptive regions of the biochemical analysis unit, the forcible flowing is ceased during a period of time longer than the ~~period of time~~ during which the reaction liquid containing the enzyme-labeled antibody has been forcibly caused to flow.

8. (currently amended): An apparatus as defined in Claim 6 wherein the flowing means operates such that, after the reaction liquid containing the enzyme-labeled antibody has been forcibly caused to flow such that the reaction liquid flows across each of the porous adsorptive regions of the biochemical analysis unit, the forcible flowing is ceased during a period of time longer than the ~~period of time~~ during which the reaction liquid containing the enzyme-labeled antibody has been forcibly caused to flow.

9. (new): An apparatus as defined in Claim 5, wherein the reaction vessel is a container comprising: a reaction liquid inlet, a reaction liquid outlet, the support section having a lower support piece and an upper support piece mechanically holding the biochemical analysis unit.

10. (new): An apparatus as defined in Claim 5, wherein the biochemical analysis unit comprises a base plate with a plurality of holes, each of the holes is filled in with porous material adhering to the base plate forming the porous adsorptive regions.

11. (new): An apparatus as defined in Claim 5, wherein the reaction vessel is a container comprising an upper half and a lower half, wherein the upper half is releasably secured to the lower half.

12. (new): An apparatus as defined in Claim 11, wherein the support section comprises a lower support piece in the lower half and an upper support piece in the upper half, wherein the upper half is dismounted from the lower half and the biochemical analysis unit is set on the lower support piece.

13. (new): The apparatus as defined in Claim 12, wherein, after the biochemical analysis unit is placed on the lower support piece, the upper half is mechanically attached to the lower half, with the upper support piece supporting the biochemical analysis unit on top.

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14. (new): A method as defined in Claim 1, further comprising respectively spotting the receptors or ligands onto each of the plurality of porous adsorptive regions and wherein the reaction liquid containing the enzyme-labeled antibody is forced to flow into an interior of each of the porous adsorptive regions of the biochemical analysis unit.

15. (new): A method as defined in Claim 3, wherein the reaction liquid containing the labeled receptor or the labeled ligand is forced to flow into an interior of each of the porous adsorptive regions of the biochemical analysis unit.

16. (new): A method as defined in Claim 3, further comprising photoelectrically detecting the bound labeled receptor or the labeled ligand in the plurality of porous adsorptive regions of the biochemical analysis unit.